

**What is claimed is:**

1. A method for detecting a propensity of an individual to response effectively to treatment of interferon- $\alpha$  and ribavirin combined therapy, the method comprising  
5 analyzing a polynucleotide sample derived from the individual for presence of genetic polymorphisms in CD81 gene, wherein the polymorphisms are associated with the treatment efficacy of interferon- $\alpha$  and ribavirin combined therapy.

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2. The method of claim 1, wherein the polymorphism is a single nucleotide polymorphism.

3. The method of claim 2, wherein the single  
15 nucleotide polymorphism is SNP rs800136.

4. The method of claim 2, wherein the single nucleotide polymorphism is SNP rs800137.

20 5. The method of claim 2, wherein the single nucleotide polymorphism is SNP rs800334.

6. The method of claim 2, wherein the single nucleotide polymorphism is SNP pos1989603.

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7. The method of claim 2, wherein the single nucleotide polymorphism is SNP rs2522012.

8. The method of claim 2, wherein the single  
5 nucleotide polymorphism is SNP rs2522013.

9. The method of claim 2, wherein the single nucleotide polymorphism is SNP rs800335.

10. The method of claim 1, wherein the analysis of  
10 the polynucleotide sample is performed by a process selected from the group consisting of detection of specific hybridization, measurement of allele size, restriction fragment length polymorphism analysis, allele-specific hybridization analysis,  
15 single base primer extension reaction, and sequencing of an amplified polynucleotide.

11. A method for detecting a propensity of an individual to response effectively to treatment of interferon- $\alpha$   
20 and ribavirin combined therapy, the method comprising an analysis of haplotype in CD81 gene and its flanking regions.